

WHAT IS CLAIMED IS:

1. An inductively coupled plasma load coil, comprising:
 - a coiled copper capillary tube;
 - an inner layer of a transition metal coating said tube; and
 - an outer layer of a noble metal plated onto said inner layer, said noble metal being different from said transition metal.
2. The load coil defined in claim 1 wherein said transition metal is taken from the group consisting of nickel, platinum, palladium, rhodium, and ruthenium
3. The load coil defined in claim 2 wherein said transition metal is nickel.
4. The load coil defined in claim 3 wherein said noble metal is gold.
5. The load coil defined in claim 4 wherein said gold is substantially pure.
6. The load coil defined in claim 5 wherein said gold is at least 99.5 % pure.
7. The load coil defined in claim 6 wherein said inner layer is substantially thicker than said outer layer.

8. The load coil defined in claim 7 wherein said inner layer is about ten times as thick as said outer layer.

9. The load coil defined in claim 7 wherein said inner layer is about 1000 microns thick and said outer layer is about 10 microns thick.

10. An inductively coupled plasma load coil, comprising:
a coiled copper capillary tube;
an outer layer of a noble metal electroplated onto said capillary tube; and
an electroplated inner layer of a material for at least substantially impeding a migration of copper from said tube to said outer layer of said noble metal, the material of said inner layer being different from said noble metal.

11. The load coil defined in claim 10 wherein said material of said inner layer comprises a transition metal.

12. The load coil defined in claim 11 wherein said transition metal is taken from the group consisting of nickel, platinum, palladium, rhodium, and ruthenium

13. The load coil defined in claim 12 wherein said transition metal is nickel.

14. The load coil defined in claim 12 wherein said noble metal is gold.